51. (NEW) The synthetic oligonucleotide of claim 41, wherein the DCMTase is from a mammal, bird, fish, amphibian, reptile, insect, plant or fungus.

52. (NEW) The synthetic oligonucleotide of claim 51, wherein the mammal is a mouse or a human.

53. (NEW) The synthetic oligonucleotide of claim 34, which is modified to include a peptide nucleic acid (PNA).

54. (NEW) The synthetic oligonucleotide of claim 41, which is modified to include a peptide nucleic acid (PNA).

REMARKS

I. Introduction

In response to the Office Action dated May 15, 2002, claims 31, 32, 37-40, 42, 43 and 46 have been amended, claims 26-30 and 35 have been canceled, and new claims 49-54 have been added. Claims 31-34 and 36-54 remain in the application. Entry of these amendments, and reconsideration of the application, as amended, is requested.

II. Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made to clarify the language of the claims, and introduce no new matter. Claims 31, 43 and 46 were amended merely to incorporate the language of the parent claim from which they previously depended, and thus are of identical scope. Claim 33 was amended merely to update the reference to its parent claim. Claims 37-39 were amended to clarify which of the recited nucleotide sequences fall within the length limitations already appearing in those claims. Claims 40 and 42 were

amended to deleted the reference to PNA, which subject matter is now addressed separately in new claims 53 and 54. New claims 49-52 are supported by claims 32 and 33, which correspond to claims 5 and 6 as originally filed. Accordingly, the new and amended claims are supported by the application as originally filed, and entry of these amendments is respectfully requested.

III. Examiner Interview

The amendments to the claims presented herein were discussed with Examiner Wilson during a telephone conference with Applicants' undersigned representative on August 14, 2002. Applicants gratefully acknowledge and appreciate the Examiner's helpful comments during this interview. These amendments are presented in a good faith belief to put the application in condition for allowance. Should the Examiner find that further action is required to put the application in condition for allowance, the courtesy of a telephone call to Applicants' representative to indicate the action required would be appreciated.

IV. Non-Art Rejection

Claims 27-30, 35-40, and 42 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The cancellation of claims 27-30 and 35 renders the rejection of these claims moot. (For the record, however, Applicants continue to maintain that there is a distinction between the permissible recitation of a functional limitation, as in claims 27-30 and 35, and recitation of intended use.) The rejection of claims 40 and 42 is rendered moot by the amendment to delete recitation of peptide nucleic acids, and the rejection of claims 36-39 is traversed.

The rejection of claims 36-39 is based on the recitation of "approximately", which is regarded by the Examiner as confusing because these claims are allegedly drawn to sequences of a specific size. With respect to claim 36, Applicants respectfully disagree, as "approximately" modifies the "oligonucleotide", which "comprises a nucleotide sequence selected from the group consisting of" the recited sequences, and each of the recited sequences falls within the recited range. Claims 37-39 have been amended to recite only those nucleotide sequences that fall within the length recited for those claims. Accordingly, withdrawal of this rejection is respectfully requested.

V. Prior Art Rejections

On page 3 of the Office Action, claims 26-30, 32, and 33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Froehler et al., U.S. Patent No. 5,830,653. The rejection of these claims is rendered moot in view of the cancellation of claims 26-30 and the amendment of claims 32 and 33 to now depend from claim 31.

VI. Acknowledgement of Allowable Claims

On page 3 of the Office Action, claims 31, 43 and 46 were objected to as being based upon a rejected base claim, and claims 34, 41, 44, 45,47 and 48 were indicated as being free of the prior art. Applicants have amended claims 41, 43 and 46 to incorporate, in independent form, all limitations of the base claim. Applicants appreciate the Examiner's acknowledgement of allowable subject matter.

VII. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

GATES & COOPER LLP
Attorneys for Applicant(s)

Howard Hughes Center
6701 Center Drive West, Suite 1050
Los Angeles, California 90045
(310) 641-8797

By: _____
Name: Karen S. Canady
Reg. No.: 39,927

Date: August 15, 2002

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APPENDIX: VERSION WITH MARKINGS TO SHOW CHANGES MADE

31. (AMENDED) [The synthetic oligonucleotide of claim 27,] A synthetic oligonucleotide of at least approximately 30 nucleotides in length and comprising a 5mCpG dinucleotide, wherein the 5mC is a C-5 methylcytosine, and which comprises a nucleotide sequence selected from the group consisting of TGACGTCA and SEQ ID NOS: 1-4, 6-12, 14-15, 18-101, 103, 105, 107 and 109, wherein the synthetic oligonucleotide comprises a phosphorothioate nucleotide.

32. (AMENDED) The synthetic oligonucleotide of claim [27] 31, wherein the DCMTase is from a mammal, bird, fish, amphibian, reptile, insect, plant or fungus.

37. (AMENDED) The synthetic oligonucleotide of claim 34, wherein the oligonucleotide is approximately 15 to approximately 50 nucleotides in length, and wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOS: 1, 2, 4, 6-8, 13, 18-101, 103, 105, 107 and 109.

38. (AMENDED) The synthetic oligonucleotide of claim 34, wherein the oligonucleotide is approximately 20 to approximately 30 nucleotides in length, and wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOS: 1, 2, 4, 6-8, 13, 18-101, 103, 105, 107 and 109.

39. (AMENDED) The synthetic oligonucleotide of claim 34, wherein the oligonucleotide is approximately 30 nucleotides in length, and wherein the nucleotide sequence is selected from the group consisting of SEQ ID NOS: 1, 2, 4, 6-8, 13, 18-101, 103, 105, 107 and 109.

40. (AMENDED) The synthetic oligonucleotide of claim 34, which comprises a phosphorothioate, [peptide nucleic acid (PNA),] deoxyribonucleic guanidine (DNG), or ribonucleic guanidine (RNG) oligonucleotide.

42. (AMENDED) The synthetic oligonucleotide of claim 41, which comprises a phosphorothioate, [peptide nucleic acid (PNA),] deoxyribonucleic guanidine (DNG), or ribonucleic guanidine (RNG) oligonucleotide.

43. (AMENDED) A pharmaceutically acceptable salt of [the synthetic oligonucleotide of claim 26] a synthetic oligonucleotide of at least approximately 30 nucleotides in length and comprising a 5mCpG dinucleotide, wherein the 5mC is a C-5 methylcytosine, and wherein the synthetic oligonucleotide comprises a phosphorothioate nucleotide.

46. (AMENDED) A composition comprising [the synthetic oligonucleotide of claim 26] a synthetic oligonucleotide of at least approximately 30 nucleotides in length and comprising a 5mCpG dinucleotide, wherein the 5mC is a C-5 methylcytosine, and wherein the synthetic oligonucleotide comprises a phosphorothioate nucleotide, and a pharmaceutically acceptable carrier.